IN THE CLAIMS

1. (currently amended): A multilevel texture processing method for mapping multiple images onto a 3D model with a texture mapping, the method comprising the steps of:

providing an image to the 3D model;

converting the image and the texture mapping to a ~~common~~ same spatial coordinate system and dividing them into a plurality of polygons;

~~comparing~~ extracting overlapped polygons from the image with the texture mapping within the spatial coordinate system ~~and extracting overlapped polygons~~;

using the pixel intensity of the overlapped polygons to compute a statistics mean for adjusting the pixel intensity of the image accordingly;

using a prescribed condition to select the texture of one of the image and the texture mapping as the texture of the polygon;

smoothing the texture of the polygon;

making the pixels inside the ~~plaquette~~ polygon continuous; and

restoring the polygon and outputting the 3D model.

2. (original): The method of claim 1, wherein the prescribed condition is selected from the group consisting of resolution, polygon orientation, and camera viewing perspective.

3. (original): The method of claim 1, wherein the step of smoothing the texture of the polygon includes texture normalization and texture blurring.

4. (original): The method of claim 3, wherein the texture normalization uses the pixel intensities of the polygons in both the image and the texture mapping to compute a weighted average for adjustment.

5. (original): The method of claim 3, wherein the texture blurring uses the textures of the polygon and its neighboring polygons to compute a weighted average for adjustment.

6. (currently amended): The method of claim 1, wherein the step of making the pixels [[of]] inside the polygon ~~texture~~ continuous is achieved by mixing colors with the neighboring polygons.

7. (currently amended): The method of claim 6, wherein the step of mixing colors with the neighboring polygons includes the steps of:

extracting a pixel on the border of the polygon with discontinuous colors; and

computing a weighted average of the intensities of the pixel and its nearest neighboring pixels as a new intensity of the pixel.

8. (currently amended): The method of claim 7, wherein the step of computing a weighted average of the intensities of the pixel and its nearest neighboring pixels as a new intensity of the pixel is followed by the steps of:

computing the difference between the weighted average intensity and the original pixel intensity; and

using the pixel intensity difference to adjust the intensities of the rest of the pixels inside the polygonal texture.